



DISCUSSING THE CURRENT ENERGY EFFICIENCY TRENDS, POLICIES, AND FINANCING INSTRUMENTS

*with Jessica Glicker from the
International Energy Agency*

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What are some of the key findings from the Energy Efficiency Market report? What trends are you seeing globally and in Europe when it comes to home and commercial building renovation?

Globally, efficiency gains since 2000 prevented 12% more energy use and emissions in 2017. However, an increase in energy using activities across many countries, regions and sectors is outweighing ongoing progress on energy efficiency, meaning that global energy demand and emissions are still rising. There is significant untapped potential remaining in energy efficiency.

As a special feature, this year's Energy Efficiency Market report included the Efficient World Scenario (EWS), developed by the IEA World Energy Outlook. This scenario shows what would result if policies were implemented that led to all available cost-effective energy efficiency measures being implemented between now and 2040. The EWS shows that while the global economy would double between now and 2040, adoption of cost-effective energy efficiency measures would limit increases in global energy demand to levels only marginally higher than today, with CO₂ emissions falling by 12%, contributing over 40% of the abatement required to be in line with the Paris agreement.

Buildings are becoming more efficient, but policy needs to be comprehensive. The EWS highlights the opportunity to improve efficiency per unit of floor area by nearly 40% compared with current levels. Using existing technologies, the global building stock in 2040 could be 60% larger than today (in floor area) for no increase in overall energy demand. To fund more efficient new buildings and upgrade existing stock, it will be vital to unlock new sources of finance, building on recent innovations that aggregate projects, link service companies to financiers, provide energy savings insurance and use alternative repayment mechanisms, like on-bill finance, to allow low-

income building owners to improve efficiency. Europe is ripe for the implementation of the PACE programme.

Energy efficiency investment continues to grow, although at a slower rate than that observed in 2016. In 2017, global energy efficiency investment reached USD 236 billion, a 3% growth from 2016. Investment in the buildings sector accounted for 59% of total investment, or USD 140 billion, with Europe continuing to lead, accounting for 32% of total investment.

To realise the potential of the Efficient World Scenario, annual investment in efficient buildings and appliances needs to increase nearly 60% from USD 140 billion in 2017, to an average of USD 220 billion up to 2025, and then to USD 360 billion to 2040. Across all sectors, average annual energy efficiency investment will need to double between now and 2025 and then double again after this to 2040. The majority of energy efficiency investments are still made by energy users own funds (on-balance sheet).

What are the most frequent questions you receive from your members about energy efficiency programmes? What type of guidance are member states looking for?

There is growing recognition globally of the benefits of energy efficiency and why it is important. Where there is less certainty is when it comes to the 'how' of efficiency. This includes questions like what types of energy efficiency policy will be most effective? How can investment be scaled-up? What value can digitalisation bring in terms of improving policy effectiveness and efficiency performance?

Also, in countries with a relatively nascent efficiency policy framework, what steps should be taken to realise the potential of energy efficiency? How can we build skills and capacity? How can we engage relevant stakeholders?



ABOUT JESSICA: Jessica Glicker is an analyst in the Energy Efficiency Division at the International Energy Agency. Her focus is on energy efficiency finance and investment on the global scale. Prior to joining the IEA, Jesse worked at the Climate Bonds Initiative in London and in sustainable architecture in New York City. She has a Masters in Economics and Policy of Energy and the Environment from University College London, and attended the George Washington University in Washington, D.C

In the case of Europe, the Energy Efficiency Directive has facilitated a lot of progress in energy efficiency improvements, and so the question is what is next? Countries are interested in what policies have facilitated greater levels of energy efficiency investment and how to reach, aggregate and fund small-scale projects. In this context, we are particularly focused on the next generation of energy efficiency policy, including what digitalisation makes possible for energy savings. We like to think of financing as part of the solution.

What are some of the elements that can help scale energy efficiency and renewable energy renovation in Europe based on your experience?

One factor favouring greater levels of investment is the replicable and scalable nature of building energy efficiency projects that have predictable returns, and can be aggregated to appeal to third party financiers. PACE and other innovations that we highlight in Energy Efficiency 2018, including the European eQuad online platform and several projects by Susi Partners Energy Efficiency fund, are great examples of this.

New approaches are being introduced in the United States to achieve energy efficiency at scale in the buildings sector. For example, in California, energy efficiency policies have mandated that at least 60% of the savings achieved in obligation schemes needs to be delivered by third-party energy service

companies (ESCOs) which are at the heart of innovative business models for energy efficiency. This has spurred new approaches, including pay-for-performance programmes, which when coupled with private financing instruments, are able to drive innovation and lower costs for energy efficiency service delivery. Establishing more enabling legislation like this is a positive way forward.

The IEA has been following innovative financing instruments for quite some time, what motivated the choice of covering PACE in so much detail?

There are many interesting initiatives starting to happen in energy efficiency finance with different advantages and angles. Our main interest regarding PACE has stemmed from the ability of the programme to coordinate and finance energy efficiency projects, with an emphasis on low-income households. The fact that PACE ensures projects are verified, achieving a certain level of savings/energy efficiency and then can standardise the contracts is seen as an innovative way to reduce the complexity associated with energy efficiency investment and improve outcomes. In addition, the ability of PACE loans to be re-financed through the green bond market, which has seen rapid growth in the past ten years, is also of interest, as it ties these loans to third-party finance, which, as we highlight in the report, is needed to increase investment.